

## CLAIMS

What is claimed is:

1. A communication terminal device with both-side receiving function comprising:

a recording unit capable of carrying out both-side recording;

an image memory for storing an image; and

a control unit for performing control by a first control mode in which a received image is stored in the image memory, and when images of two pages that are in relationship of a front page and a back page are stored in the image memory, the images of the two pages are recorded on both sides of a sheet by the recording unit.

2. The communication terminal device according to claim 1 wherein the control unit controls recording and outputting order, and when images of two pages that should be recorded next time in accordance with the recording and outputting order are stored in the image memory, the control unit makes the recording unit record the images of two pages that should be recorded next time on both sides of a sheet.

3. The communication terminal device according to claim 1 wherein the control unit possesses a second control mode in which both-side recording is started after receiving of images of all pages has been completed, and the control unit carries out either the first control mode or the second control mode selectively.

4. The communication terminal device according to claim 2 wherein the control unit possesses a second control mode in which both-side recording is started after receiving of images of all pages has been completed, and the control unit carries out either the first control mode or the second control mode selectively.

5. The communication terminal device according to claim 3 wherein the control unit performs control such that when free space in the image memory is more than a predetermined amount, the control unit selects the second control mode, and when the free space in the image memory is not more than the predetermined amount, the control unit selects the first control mode.

6. The communication terminal device according to claim 4 wherein the control unit performs control such that when free space in the image memory is more than a predetermined amount, the control unit selects the second control mode, and when the free space in the image memory is not more than the predetermined amount, the control unit selects the first control mode.

7. The communication terminal device according to claim 3 wherein in the second control mode, when a page corresponding to one of images to be recorded on both sides of a sheet does not exist, the other of the images is recorded on one side of the sheet without recording the one of the images.

8. The communication terminal device according to claim 4 wherein in the second control mode, when a page corresponding to one of images to be recorded on both sides of a sheet does not exist, the other of the images is recorded on one side of the sheet without recording the one of the images.

9. The communication terminal device according to claim 3 wherein in the second control mode, when a page corresponding to one of images to be recorded on both sides of a sheet does not exist, a blank image is recorded on one side of the sheet, said one side having no corresponding page.

10. The communication terminal device according to claim 4 wherein in the second control mode, when a page corresponding to one of images to be recorded on both sides of a sheet does not exist, a blank image is recorded on one side of the sheet, said one side having no corresponding page.

11. The communication terminal device according to claim 1 further including receiving means for receiving an image, wherein the receiving means first receives images of front pages, and then receives images of back pages.

12. The communication terminal device according to claim 1 further including receiving means for receiving an image, wherein the receiving means receives images of a front page and a back page alternately.

13. The communication terminal device according to claim 1, wherein when the images of the two pages have been recorded on the both sides of the sheet, the images of the two pages are erased from the image memory.

14. The communication terminal device according to claim 1, further including receiving means for receiving an image, wherein when images that includes images of a different size document are transmitted to the communication terminal device, the receiving means receives images of a same size document together.

15. The communication terminal device according to claim 1, wherein the recording unit carries out both-side recording sheet by sheet such that after the recording unit records one of the images of the two pages that are in relationship of the front page and the back page on one side of the sheet, the recording unit reverses the sheet, and then records the other of the images of the two pages on the other side of the sheet.

16. A method of performing both-side recording, comprising the steps of:

(A) receiving an image;

(B) storing the image in an image memory;

(C) carrying out both-side recording under a first control mode in which when images of two pages that are in relationship of a front page and a back page are stored in the image memory, the images of the two pages are recorded on both sides of a sheet, and are erased from the image memory.

17. The method according to claim 16, wherein in the step (C), the recording is carried out in page number order such that when images of two pages to be recorded next time in accordance with the page number order are stored in the image memory, the images of the two pages to be recorded next time are recorded on both sides of a sheet.

18. The method according to claim 16, wherein in the step of (C), instead of the first control mode, the both-side recording can be carried out under a second control mode in which after images of all pages have been received and stored in the image memory, the both-side recording is started, and the both-side recording can be carried out by selecting either the first control mode or the second control mode.

19. The method according to claim 18, wherein when free space in the image memory is more than a predetermined amount, the both-side recording is carried out under the second control mode, and when the free space in the image memory is not more than the predetermined amount, the both-side recording is carried out under the first control mode.

20. The method according to claim 16, wherein under the second control mode, when one of images of two pages that are in relationship of a front page and a back page does not exist, a blank image and the other of the images of the two pages are recorded on both sides of a sheet.